

In re Application of PARDIKAR et al.
Serial No. 10/052,039

REMARKS

The Office action has been carefully considered. The Office action rejected claim 1 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,654,794 to French et al. ("French"). Further, the Office action rejected claims 1-11, 15-23, 25-27 and 32-38 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,842,770 to Serlet et al. ("Serlet") in view of French. Further yet, the Office action rejected claims 12-14, 28-30, and 39-41 under 35 U.S.C. § 103(a) as being unpatentable over Serlet in view of French and in further view of U.S. Patent No. 6,714,968 to Prust et al. ("Prust"). Still further, the Office action rejected claim 31 under 35 U.S.C. § 103(a) as being unpatentable over Serlet in view of Prust. The Office action rejected claim 24 under 35 U.S.C. § 103(a) as being unpatentable over Serlet in view of French and in further view of U.S. Patent No. 6,629,127 to Deen et al. ("Deen"). Applicants respectfully disagree.

By present amendment, claims 1 and 16 have been amended for clarification and not in view of the prior art. Applicants submit that the claims as filed were patentable over the prior art of record, and that the amendments herein are for purposes of clarifying the claims and/or for expediting allowance of the claims and not for reasons related to patentability. Reconsideration is respectfully requested.

Prior to discussing reasons why applicants believe that the claims in this application are clearly allowable in view of the teachings of the cited and applied references, a brief description of the present invention is presented.

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The present invention is directed to a system and method that automatically and transparently handles WebDAV file access, whereby applications (including WebDAV unaware applications) can access WebDAV files through conventional file system-directed API (application programming interface) calls or the like. Applications can also issue network-related requests to WebDAV servers, such as for browsing, with those requests transparently handled as if a WebDAV share was a local folder.

To this end, the present invention comprises a WebDAV redirector and related components that receive requests directed to a WebDAV server, and take actions to handle the request locally or remotely as appropriate. For example, the WebDAV redirector and related components support I/O requests and network requests directed to WebDAV servers identified by URI (Universal Resource Identifier) names, or by a drive, may be mapped to a WebDAV share.

The redirector components operate to determine whether an application's create or open I/O request is directed to a WebDAV server that is connected and operating, and if so, whether a specified share and file on that server are accessible by requesting capability information from the server. If so, the redirector informs a multiple UNC provider that it can handle the request, and a local copy of the file is downloaded and cached for local I/O access, whereby reads and writes to the WebDAV server are made from and to the cached file. When closed, the local file is uploaded to the WebDAV server if it has been modified on the client.

Network-related requests that are directed to a WebDAV server, such requests as related to browsing, are also handled transparently by acting on API

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calls or the like corresponding to the request. For example, an API call to enumerate a WebDAV share is provided to the WebDAV redirector components, which determine whether the server and share is valid, and if so, inform a multiple provider router that the request can be handled. Network communications are controlled by the WebDAV redirector components to handle the request.

Note that the above description is for example and informational purposes only, and should not be used to interpret the claims, which are discussed below.

§102 Rejections

Turning to the claims, independent claim 1 recites in a computer network, a method comprising receiving at an I/O manager an I/O request initiated from an application program directed to a file on a WebDAV server, directing the I/O request to a WebDAV redirector for communicating with the WebDAV server to determine whether the request can be handled by obtaining capability information from the WebDAV server, and if so, requesting a file system to create the file, downloading the file to a local cache of the file system, and returning a file handle corresponding to the file in the local cache to the application program, providing access to the file in the local cache of the file system via the file handle, and receiving a request to close the file via the file handle, and when received, uploading the file from the local cache of the file system to the WebDAV server.

The Office action rejected claim 1 as being anticipated by French. More specifically, the Office action contends that French teaches receiving at an I/O manager an I/O request initiated from an application program directed to a file on a

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WebDAV server. Column 4, line 58 to column 5, line 19 of French is referenced. Further, the Office action contends that French teaches directing the I/O request to a WebDAV redirector for communicating with the WebDAV server to determine whether the request can be handled, and if so, requesting a file system to create the file. Column 4, lines 20-41, column 5, lines 42-57, and column 6, lines 21-34 of French are referenced. Still further, the Office action contends that French teaches downloading the file to a local cache of the file system, and returning a file handle corresponding to the file in the local cache to the application program. Column 4, line 66 to column 5, line 19 of French is referenced. Further yet, the Office action contends that French teaches providing access to the file in the local cache of the file system via the file handle. Column 5, lines 42-57 of French is referenced. Finally, the Office action contends that French teaches receiving a request to close the file via the file handle, and when received, uploading the file from the local cache of the file system to the WebDAV server. Column 8, table 1 of French is referenced. Applicants respectfully disagree.

French teaches, generally, a system and method for allowing a local application to remotely access file as though the files were local. To this end, French teaches a file system manager that is operable to receive all requests for files from an operating system associated with the platform in which the file system manager is operating. The file system manager is configured to work in conjunction with various file system drivers (FSDs) for accessing files that may be located remotely. One such FSD taught by French is a WebDAV FSD that is able

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to work in conjunction with the file system manager in a pre-configured manner to retrieve files that may be located on an associated WebDAV-enabled server.

French, however, teaches a pre-configured relationship between the file system manager and the WebDAV FSD. That is, when request for a file that may be located at the WebDAV server are routed to the file system manager, the file system manager automatically routes the request through to the appropriate FSD (in this case, the WebDAV FSD) to the server without regard for whether or not the server may handle the particular request. Thus, because the file system manager is already aware that the dedicated WebDAV FSD has a preconfigured relationship with the appropriate server, there is no need to communicate with the WebDAV server to determine whether it can handle the request.

In contrast, claim 1 recites communicating with the WebDAV server to determine whether the request can be handled. In the method of the present invention, the redirector need not be dedicated to a particular WebDAV server with a pre-configured relationship. Rather, the redirector may be able to communicate with any server in which a requested file may be located. As such, the redirector is operable to communicate with any potential WebDAV server to determine whether or not that particular WebDAV can handle the request. French does not teach this because the system and method of French teaches a pre-configured relationship between the file system manager and the WebDAV FSD. Thus, no communication between these two components exists to determine file request handling capabilities.

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Furthermore, claim 1 has been amended to recite that the WebDAV server returns capability information in response to the communication to determine whether the WebDAV server can handle the request. Certainly, French does not teach returning capability information as with French's pre-configured relationship, there is no need to do so. French is completely silent to the concept of verifying the file request handling ability of a remote server via capability information. As such, French does not teach all the recitations of claim 1 and falls short of the legal requirements to support an anticipation rejection.

For at least the foregoing reasons, applicants submit that claim 1 is allowable over the prior art of record with respect to the §102 rejection.

§103 Rejections

Turning to the §103 rejections, claim 1 recites in a computer network, a method comprising receiving at an I/O manager an I/O request initiated from an application program directed to a file on a WebDAV server, directing the I/O request to a WebDAV redirector for communicating with the WebDAV server to determine whether the request can be handled by obtaining capability information from the WebDAV server, and if so, requesting a file system to create the file, downloading the file to a local cache of the file system, and returning a file handle corresponding to the file in the local cache to the application program, providing access to the file in the local cache of the file system via the file handle, and receiving a request to close the file via the file handle, and when received, uploading the file from the local cache of the file system to the WebDAV server.

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The Office action rejected claim 1 as being unpatentable over Serlet in view of French. More specifically, the Office action contends that Serlet teaches returning a file handle corresponding to the file in the local cache to the application program. Column 11, lines 24-49 of Serlet is referenced. Further, the Office action contends that Serlet teaches receiving a request to close the file via the file handle, and when received, uploading the file from the local cache of the file system to the WebDAV server. Column 12, lines 45-54 is referenced.

The Office action acknowledges that all remaining recitations of claim 1 are not disclosed by Serlet including communicating with the WebDAV server to determine whether the request can be handled by obtaining capability information from the WebDAV server. However, the Office action contends that French does disclose the remaining recitations. Specifically, the Office action contends that French teaches receiving at an I/O manager an I/O request initiated from an application program directed to a file on a WebDAV server. Column 4, line 58 to column 5, line 19 of French is referenced. Further, the Office action contends that French teaches directing the I/O request to a WebDAV redirector for communicating with the WebDAV server to determine whether the request can be handled, and if so, requesting a file system to create the file. Column 4, lines 20-41, column 5, lines 42-57, and column 6, lines 21-34 of French is referenced. Still further, the Office action contends that French teaches downloading the file to a local cache of the file system. Column 4, line 66 to column 5, line 19 of French is referenced.

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The Office action concludes that the recitations of claim 1 are obvious in view of the combination of the teachings of Serlet with the teachings of French because an improved network file system provides a client with the ability to access remote resources maintained by a server. Applicants respectfully disagree.

To establish *prima facie* obviousness of a claimed invention, all of the claim recitations must be taught or suggested by the prior art; (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)), and "all words in a claim must be considered in judging the patentability of that claim against the prior art;" (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Further, if prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997). Moreover, if a modification would render a reference unsatisfactory for its intended purpose, the suggested modification / combination is impermissible. See MPEP § 2143.01

Applicants submit that the Office action has failed to establish a *prima facie* case for obviousness. Serlet is directed, generally, to a system and method for allowing a local application to seamlessly access files as though the files were initially local and teaches virtually the same system and method as taught by French. Serlet teaches an SFS network access program that performs functions similar to the file system manager of French. Thus, the SFS network access program may retrieve remote files from a remote WebDAV server in a similar manner. Also similar to French, however, the system of Serlet does not need to (nor can it) determine whether or not the WebDAV server is capable of handling

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specific file requests. In fact, the Office action explicitly acknowledges this by saying as much. The Office action turns to the teachings of French in an attempt to cure this deficiency.

As discussed above, French teaches, generally, a system and method for allowing a local application to remotely access file through a file system manager that is operable to receive all requests for files from an operating system associated with the platform in which the file system manager is operating. The file system manager is configured to work in conjunction with various FSDs for accessing files that may be located remotely. One such FSD taught by French is a WebDAV FSD that is able to work in conjunction with the file system manager in a pre-configured manner to retrieve files that may be located on an associated WebDAV-enabled server.

As discussed above however, French merely teaches a pre-configured relationship between the file system manager and the WebDAV FSD. Thus, because the file system manager is already aware that the dedicated WebDAV FSD is functional because of the preconfigured relationship, there is no need to communicate with the WebDAV server to determine whether it can handle the request.

In contrast, claim 1 recites communicating with the WebDAV server to determine whether the request can be handled. French does not teach this because the system and method of French teaches a pre-configured relationship between the file system manager and the WebDAV FSD. Thus, no communication between these two components exists to determine file handling capabilities.

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Furthermore, claim 1 has been amended to recite that the WebDAV server returns capability information in response to the communication to determine whether the WebDAV server can handle the request. Certainly, French (or Serlet, for that matter) does not teach returning capability information as there is no need to do so. French is completely silent to the concept of verifying handling capability via capability information. As such, Serlet and French, whether considered individually or in any permissible combination with each other or any other prior art of record, do not teach all the recitations of claim 1 and falls short of the legal requirements to support an obviousness rejection. Applicants submit that claim 1 is allowable over the prior art of record for at least the foregoing reasons.

Applicants respectfully submit that dependent claims 2-15, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 1 and consequently includes the recitations of independent claim 1. As discussed above, Serlet and French, whether considered individually or in any permissible combination with each other or any other prior art of record (including Prust), fail to teach or suggest the recitations of claim 1 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 1 noted above, each of these dependent claims includes additional patentable elements.

For example, claim 4 recites the method of claim 1 wherein communicating with the WebDAV server to determine whether the request can be handled, comprises, issuing an HTTP OPTIONS request, and evaluating a response therefrom. The Office action contends that Serlet teaches this recitation. This is

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simply erroneous logic in that the Office action explicitly acknowledged that Serlet does not teach communicating with the WebDAV server to determine whether the request can be handled but then contends that Serlet teaches a variation of how to accomplish this task, *i.e.*, using an HTTP OPTIONS request. Although Serlet may be aware of an HTTP OPTIONS request, it does not teach using it in the manner recited in claim 4. For at least this additional reason, applicants submit that claim 4 is allowable over the prior art of record.

As another example, claim 5 recites the method of claim 1 wherein communicating with the WebDAV server to determine whether the request can be handled, comprises, issuing a WebDAV PROPFIND request directed to a share on the WebDAV server, and evaluating a response therefrom. Again, this is erroneous logic in that the Office action explicitly acknowledged that Serlet does not teach communicating with the WebDAV server to determine whether the request can be handled but then contends that Serlet teaches a variation of how to accomplish this task, *i.e.*, a WebDAV PROPFIND request. Although Serlet may be aware of a WebDAV PROPFIND request, it does not teach using it in the manner recited in claim 5. For at least this additional reason, applicants submit that claim 5 is allowable over the prior art of record.

Turning to the next independent claim, claim 16 recites a computer-implemented method, comprising receiving at a local application programming interface layer an application request that relates to a Uniform Resource Identifier, providing information corresponding to the request to a local WebDAV redirector, and determining at the WebDAV redirector whether a server identified via the

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application request comprises a WebDAV-enabled server by obtaining capability information from the server, and if so, handling the request.

The Office action rejected claim 16 as being unpatentable over Serlet in view of French. More specifically, the Office action contends that Serlet teaches receiving at a local application programming interface layer an application request that relates to a Uniform Resource Identifier. Column 4, line 54 to column 5, line 2 and column 5, lines 20-52 of Serlet are referenced. The Office action acknowledges that Serlet fails to teach the remaining recitations of claim 16 but contends that French does teach the remaining recitations. In specific, the Office action contends that French teaches providing information corresponding to the request to a local WebDAV redirector, and determining at the WebDAV redirector whether a server identified via the application request comprises a WebDAV-enabled server, and if so, handling the request. Column 4, lines 20-57 of French are referenced. The Office action concludes that the recitations of claim 16 are obvious in view of the combination of the teachings of Serlet with the teachings of French because an improved network file system provides a client with the ability to access remote resources maintained by a server. Applicants respectfully disagree.

Applicants submit that the Office action has failed to establish a *prima facie* case for obviousness. Serlet and French are both examples of prior art wherein an operating system uses a routing component (an SFS network access program in Serlet and a file system manager in French) to coordinate the routing of file requests to remote servers. One such pre-configured relationship in both Serlet

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and French includes a process for retrieving files from a WebDAV-enabled remote server. Thus, as a request for a file is received wherein the file is located on the WebDAV-enabled server, the request is passed straight through to the dedicated WebDAV-enabled server without regard for whether the WebDAV-enabled server can handle the request. That is, both Serlet and French, whether considered alone or in any permissible combination, teach systems that are wholly unconcerned with determining whether or not a remote server can handle this type of request, because the very nature of the pre-configured relationship mitigates the need to check in the first place.

In contrast, claim 16 recites a method for accomplishing that which the prior art falls short of teaching. In specific, claim 16 recites determining at the WebDAV redirector whether a server identified via the application request comprises a WebDAV-enabled server. Simply put, neither Serlet, nor French teaches or even suggests this recitation. In fact, both Serlet and French teach away from this recitation in that the pre-configured nature of the relationship between the remote server and the respective routing components eliminates any need to determine whether the particular requests may be fulfilled. If prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997).

Furthermore, claim 16 has been amended to recite obtaining capability information from the server. Certainly, Serlet and French do not teach obtaining capability information as there is no need to do so. Both Serlet and French are

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completely silent to the concept of verifying handling capability via capability information. As such, Serlet and French, whether considered individually or in any permissible combination with each other or any other prior art of record, do not teach all the recitations of claim 16 and fall short of the legal requirements to support an obviousness rejection. Applicants submit that claim 16 is allowable over the prior art of record for at least the foregoing reasons.

Applicants respectfully submit that dependent claims 17-32, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 16 and consequently includes the recitations of independent claim 16. As discussed above, Serlet and French, whether considered individually or in any permissible combination with each other or any other prior art of record (including Prust and Deen), fail to teach or suggest the recitations of claim 16 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 16 noted above, each of these dependent claims includes additional patentable elements.

Turning to the last independent claim, claim 33 recites in a computer network, a system comprising, an application program that issues WebDAV-related requests, including at least one request having an identifier corresponding to a WebDAV server, a WebDAV redirector, the WebDAV redirector configured to communicate with a network server to obtain capability information thereof, and to evaluate the capability information to determine whether the network server comprises a WebDAV-enabled server, and when the capability information indicates that the network server is WebDAV-enabled, the WebDAV redirector

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locally handling each request corresponding to the WebDAV server that can be handled locally, and communicating with the WebDAV server to handle requests that cannot be handled locally.

The Office action rejected claim 33 as being unpatentable over Serlet in view of French. More specifically, the Office action contends that Serlet teaches an application program that issues WebDAV-related requests, including at least one request having an identifier corresponding to a WebDAV server. Column 6, lines 25-64 of Serlet are referenced. However, the Office action acknowledges that Serlet fails to teach any of the remaining recitations of claim 33.

The Office action contends, just the same, that the teachings of French cure this significant deficiency. In specific, the Office action contends that French teaches a WebDAV redirector, the WebDAV redirector configured to communicate with a network server to obtain capability information thereof, and to evaluate the capability information to determine whether the network server comprises a WebDAV-enabled server, and when the capability information indicates that the network server is WebDAV-enabled, the WebDAV redirector locally handling each request corresponding to the WebDAV server that can be handled locally, and communicating with the WebDAV server to handle requests that cannot be handled locally. Column 4, lines 20-41 and column 7, lines 5-15 of French are referenced.

The Office action concludes that the recitations of claim 33 are obvious in view of the combination of the teachings of Serlet with the teachings of French because an improved network file system provides a client with the ability to access remote resources maintained by a server. Applicants respectfully disagree.

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Applicants submit that the Office action has failed to establish a *prima facie* case for obviousness. Once again, Serlet and French are both examples of prior art wherein an operating system uses a routing component (an SFS network access program in Serlet and a file system manager in French) to coordinate the routing of file requests to remote servers. One such pre-configured relationship in both Serlet and French includes a process for retrieving files from a WebDAV-enabled remote server. Thus, as a request for a file is received wherein the file is located on the WebDAV-enabled server, the request is passed straight through to the dedicated WebDAV-enabled server without regard for whether the WebDAV-enabled server can handle the request. That is, both Serlet and French teach systems that are wholly unconcerned with determining whether or not a remote server can handle this type of request because the very nature of the pre-configured relationship mitigates the need to check in the first place.

In contrast, claim 33 recites a WebDAV redirector configured to communicate with a network server to obtain capability information thereof. Neither Serlet nor French teach or even suggest communicating with a network server for the sole purpose for determining whether the network server can handle a specific request, *i.e.*, obtaining capability information thereof. In fact, Serlet and French both teach away from this concept in that there is no need whatsoever to determine handling capabilities because of the pre-configured relationships between routing components and servers in the systems taught by Serlet and French respectively. As noted above, if a reference teaches away from the

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claimed recitations in an material manner, the reference may not be used to support an obviousness rejection.

Furthermore, claim 33 recites that when the capability information indicates that the network server is WebDAV-enabled, the WebDAV redirector locally handling each request corresponding to the WebDAV server that can be handled locally, and communicating with the WebDAV server to handle requests that cannot be handled locally. Since Serlet and French are completely unaware of the concept of determining handling capabilities, certainly neither of these references may also use capability information in the manner recited in claim 33. Simply put, Serlet and French, whether considered individually or in any permissible combination with each other or any other prior art of record, fail to teach or suggest the recitations of claim 33. Applicants submit that claim 33 is allowable over the prior art of record for at least the foregoing reasons.

Applicants respectfully submit that dependent claims 34-41, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 33 and consequently includes the recitations of independent claim 33. As discussed above, Serlet and French, whether considered individually or in any permissible combination with each other or any other prior art of record (including Prust), fail to teach or suggest the recitations of claim 33 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 33 noted above, each of these dependent claims includes additional patentable elements.

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For at least these additional reasons, applicants submit that all the claims are patentable over the prior art of record. Reconsideration and withdrawal of the rejections in the Office action is respectfully requested and early allowance of this application is earnestly solicited.

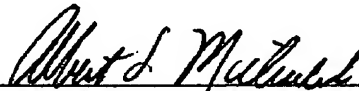
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CONCLUSION

In view of the foregoing remarks, it is respectfully submitted that claims 1-41 are patentable over the prior art of record, and that the application is in good and proper form for allowance. A favorable action on the part of the Examiner is earnestly solicited.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney at (425) 836-3030.

Respectfully submitted,



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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this Response, along with transmittal, petition for extension of time, credit card payment form and facsimile cover sheet, are being transmitted by facsimile to the United States Patent and Trademark Office in accordance with 37 C.F.R. 1.6(d) on the date shown below:

Date: December 15, 2005


Albert S. Michalik

2940 second Amendment